

Notice of Allowability

Application No.

10/069,512

Examiner

Rodney G. McDonald

Applicant(s)

YAMASAKI ET AL.

Art Unit

1753

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12-22-03.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ The drawings filed on 04 March 2002 and 22 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Rodney G. McDonald
Primary Examiner
Art Unit: 1753

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Claims 1-6 are indicated as being allowable over the prior art of record because the prior art of record does not teach providing second and third anisotropic magnets directing a net magnetic force radially toward the center of the dipole ring magnet serving to locally increase a magnetic field strength of the predetermined region, such that the magnetic field strength of the predetermined region is larger than a magnetic field strength contributed by first anisotropic magnets alone.

Claims 7-11 are indicated as being allowable over the prior art of record because the prior art of record does not teach first and second sections of one or more adjoining anisotropic magnets directing a net magnetic force radially toward the center of the dipole ring magnet which is made up of a plurality of anisotropic segment magnets, the first and second sections serving to locally increase magnetic field strengths of first and second regions, such that the magnetic field strengths of the first and second regions are larger than the corresponding magnetic field strengths contributed by the plurality of anisotropic segment magnets alone.

Claim 12 is indicated as being allowable over the prior art of record because the prior art of record does not teach second magnetic field forming means for increasing a magnetic field strength at one or more predetermined regions, the predetermined regions located proximate to and outside of that end of the target substrate on the upstream side in the electron drift direction, the first and second magnetic field forming

Art Unit: 1753

means forming a maximum field strength of 200 Gauss above the target substrate and a minimum magnetic field strength of 200 Gauss at the predetermined regions.

Claim 13 is indicated as being allowable over the prior art of record because the prior art of record does not teach a second magnetic field forming means for increasing a magnetic field strength at one or more predetermined regions, the predetermined regions located proximate to and outside that end of the target substrate which is on the upstream side in the electron drift direction, the first and second magnetic field forming means forming an overall magnetic field gradient, such that the magnetic field strength increases by more than 500 Gauss over the range of 150 mm to 250 mm from the center of the first magnetic field forming means, along the electron drift direction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M- Th with Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney G. McDonald
Primary Examiner
Art Unit 1753

RM
March 10, 2004